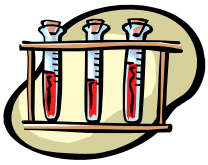
Survival Skills . . . for the Person with Diabetes

Diabetes Medications

High Blood Sugar

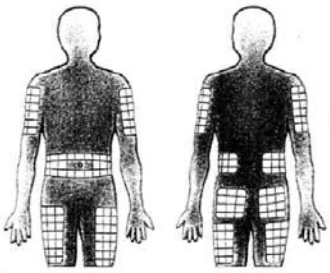


Nutrition

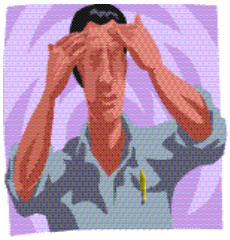
Insulin

Blood Sugar Testing

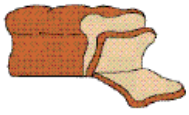
Injection Sites



Low Blood Sugar



Carbohydrate Counting



Glucagon

Exercise

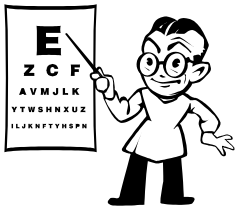
Sick Day Management

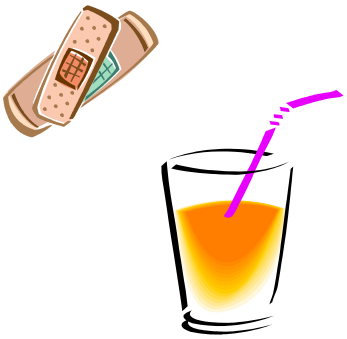
What Is High Blood Sugar?

Blood Glucose above 250 - Also called Hyperglycemia

What are the Symptoms?

- Urinating more often, especially at night
- Blurred vision
- Fatigue or low energy
- Increased thirst
- Increased hunger
- Dry skin
- Slow healing wounds





What Causes High Blood Sugar?

- Eating too much food or sugary liquids
- Not exercising
- Not taking enough diabetes medicine
- Forgetting to take diabetes medicine
- Illness/infection
- Stress

What Can I Do About High Blood Sugar?

- Drink plenty of non-caloric fluids
- Take your diabetes medicines as prescribed
- Follow your meal plan
- Exercise (if urine is negative for ketones)
- Check your blood sugar before meals and at bedtime until your blood sugar is less than 200
- If you have Type 1 diabetes, check your urine for ketones
- Review the causes above and think of which one may have caused your sugar to increase

Is Hypoglycemia Similar to Hyperglycemia?

Many of the symptoms of hypoglycemia and hyperglycemia are similar including hunger or blurred vision. If you have any of these symptoms and your blood sugar is below 70, follow treatment for **Hypoglycemia,** such as drinking 4 ounces of orange juice or taking 3 glucose tablets.

Contact your healthcare provider or go to the hospital or clinic if your blood sugar levels are higher than your goal for greater than three days

What is Low Blood Sugar?

Blood Glucose below 70 - Also called Hypoglycemia

What are the Symptoms?

- Weakness
- Fast heart beat
- Shakiness
- Irritability or Anxiety
- Blurred vision
- Hunger
- Headache
- Sweating
- Light-headedness

What Causes Low Blood Sugar?

- Delayed meals
- Not eating enough
- Too much diabetes medicine
- Unplanned strenuous activity
- Drinking alcohol on an empty stomach

What Can I Do About Low Blood Sugar?

- Drink ½ cup of juice or regular soda or eat some hard candy
- Test blood sugar if symptoms don't stop
- Eat a snack of ½ peanut butter or meat sandwich right away if the next meal is longer than 1-2 hours away
- Monitor your blood sugars closely especially if there is a change in your treatment, activity level or food intake
- Do not drive if your blood sugar is low
- Always carry a source of sugar/carbohydrate
- Wear or carry medical alert identification
- Educate family or friends about how to treat low blood sugar and how to use glucagon
- For repeated low blood sugars call your health care provider or telephone advice nurse

What is the 15-15 Rule?

- If your blood sugar is low (< 70), eat or drink 15 grams of a fast acting carbohydrate
- Check your blood sugar in 15 minutes, if no improvement, repeat the treatment with 15 grams of carbohydrates
- If your blood sugar is less than 50, take 2 carbohydrate choices or 30 grams of carbohydrates
- Check your blood sugar every 15 minutes until your blood sugar is > 70
- Other sources of carbohydrates containing 15 grams include: Glucose tablets (3 tablets), sugar packets (3 packets) and Life Savers® (5 pieces)

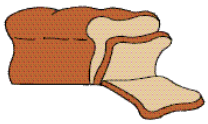
If you become unconscious or confused, have family or friends call 911

What is Carbohydrate Counting?

A method of meal planning which controls the total amount of carbohydrates eaten per day.

Eat a consistent amount of carbohydrates throughout the day. Eat about the same time each day.

10 Thick French fries
20 Thin French fries



1 slice of bread

1 tablespoon
sugar, honey, jelly

One Carbohydrate Choice

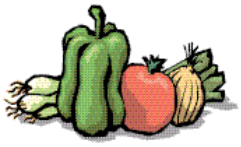
Equals 15 Grams of

Carbohydrate

½ Cup of Juice

1 small fruit

½ cup or 1 ounce
chips or pretzels



3 cups raw
1 ½ cup cooked
vegetables

½ cup plain
ice cream

How Do Carbohydrates Function?

All carbohydrates are broken down to glucose

All carbohydrates provide the same number of calories (4 per gram)

Extra carbohydrates are stored as fat for later use

Carbohydrates are the body's main source of fuel

Carbohydrates are stored in the liver as fuel reserves

Carbohydrate Foods Are Sugar, Starch and Fiber
One Serving Equals 15 Grams of Carbohydrate

Food Group and Serving Size	Food Type
Starch	
1 slice bread	Bread, rolls, bagels, English muffins, tortillas, and pita bread
1/3 cup pasta or rice	Pasta, noodles, spaghetti, macaroni and rice
1/2 cup cereal	Oatmeal, bran flakes
1/2 cup starchy vegetables	Potatoes, corn, peas, acorn squash
1/2 cup dried beans or peas	Legumes: lentils, dried beans, (garbanzo, kidney, black, and butter beans), dried peas (split peas and black-eyed peas)
Fruit	
1/2 large or 1 small	Apples, oranges, bananas, and other fruits
1/2 cup	Fresh, frozen, canned or juiced
Dairy Products	
1 cup	All milk – 1% or skim are better choices
6 ounces	Yogurt (plain or artificially sweetened)
1 cup	Sugar-free hot chocolate mixes
Vegetables	
3 cups raw or 11/2 cups cooked	Carrots, green beans, broccoli, greens, okra and other crunchy vegetables not listed under the starch group
Other (2 carbohydrates)	Foods that include any of the items below:
1 slice	restaurant-style pizza – medium slice
1 cup	Tuna or macaroni and cheese casserole
Other (1 carbohydrate)	
1 cup	Chicken noodle soup
1 cup	Beef stew
Dessert/Sweets (1 carbohydrate)	
1 tablespoon	Sugar, honey, jelly
1/2 cup	Ice cream, frozen yogurt
2 small cookies	Small commercial-type cookies
Dessert/Sweets (2 carbohydrates)	
1/2 slice of pie or cake	Dessert style pie and cake
Snack Foods (1 carbohydrate)	
1/2 cup or 1 ounce	Pretzels
3 cups	Popcorn, popped, no added fat

Your Diabetes Medications

Your health care provider will decide which medicine is best for you based on your age, your lifestyle, your health and your blood sugar levels. You should keep a list of all of your medications.

Try to know the following regarding your diabetes medications:

- Names of diabetes medication(s)
- When and how often to take the medication
- When it starts and how long the medication works
- Possible side effects
- Drug/food interactions
- What to do if you forget a dose

While all medicines can cause side effects, many are temporary. If you have side effects, talk to your health care team. Never stop taking medication on your own. You and your health care provider may need to change the dose or try a new one.

The chart on the next page will show you the names of the medications, where they work on the body and how they control blood sugar.

Type 2 Diabetes and Medications

Type 2 diabetes is a complex condition that results in high blood glucose levels because: 1) the pancreas does not produce enough insulin 2) the liver releases too much glucose 3) muscle cells do not readily take in glucose

There are five classes of oral diabetes medications. The picture of a body on the next page will further explain these agents. Here is an overview:

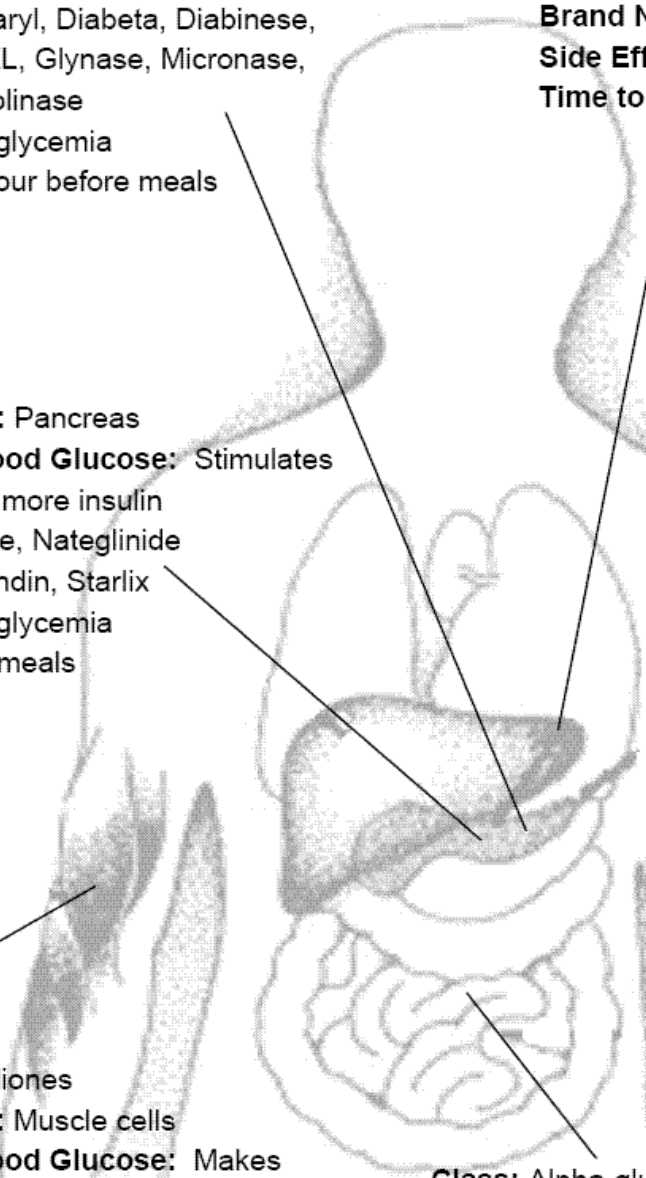
1. The **sulfonylureas** stimulate the pancreas to release more insulin.
2. The **meglitinides** also stimulate the pancreas, but more rapidly after eating than the sulfonylureas.
3. The **biguanides** keep the liver from releasing too much glucose, increase the muscle's sensitivity to insulin and improve some levels of blood fat.
4. The **alpha-glucosidase inhibitors** slow the digestion of complex carbohydrates.
5. The **thiazolidinediones** make the muscle more sensitive to insulin and help improve some levels of blood fat.
6. **Insulin** comes in many types: short-acting, intermediate, long-acting and pre-mixed. Insulin must always be injected.

The specific side effect from each class of drugs is pointed out in the picture of the body. Your health care provider will select your medications based on your individual needs. Your health care provider will also order any needed blood tests to determine which pill is appropriate for you. Routine follow-up blood testing will also be done according to specific drug guidelines. Always report any symptoms noted with a new drug to your health care provider immediately.

Description of Diabetes Medications

Class: Sulfonylureas
Main Site of Action: Pancreas
How It Controls Blood Glucose: Stimulates Pancreas to release more insulin
Generic: Glyburide, Glipizide, Glimepiride, Tolbutamide, Chlorpropamide, Tolazamide
Brand Names: Amaryl, Diabeta, Diabinese, Dymelor, Glucatrol XL, Glynase, Micronase, PresTab, Orinase, Tolinase
Side Effects: Hypoglycemia
Time to take: 1/2 hour before meals

Class: Biguanides
Main Site of Action: Liver
How It Controls Blood Glucose: Keeps liver from releasing too much glucose
Generic: Metformin
Brand Names: Glucophage
Side Effects: Stomach cramps
Time to take: With meals



Class: Meglitinides
Main Site of Action: Pancreas
How It Controls Blood Glucose: Stimulates Pancreas to release more insulin
Generic: Repaglinide, Nateglinide
Brand Names: Prandin, Starlix
Side Effects: Hypoglycemia
Time to take: With meals

Insulin: Replaces insulin made in the pancreas at meals
Generic: Regular, Lispro, Aspart
Brand Names: Novolin, Humalin, Humalog
Side Effects: Hypoglycemia
Time to take: With meals
Insulin: Replaces basal insulin secretion
Generic: NPH, Lente, Glargine, Ultralente
Brand Names: Novolin, Humalin, Lantus
Side Effects: Hypoglycemia
Time to take: Bedtime, with meals

Class: Thiazolidinediones
Main Site of Action: Muscle cells
How It Controls Blood Glucose: Makes muscle cells more sensitive to insulin
Generic: Pioglitazone, Rosiglitazone
Brand Names: Avandia, Actos
Side Effects: Liver damage, swelling of feet and legs
Liver functions tests are required
Time to take: With meals

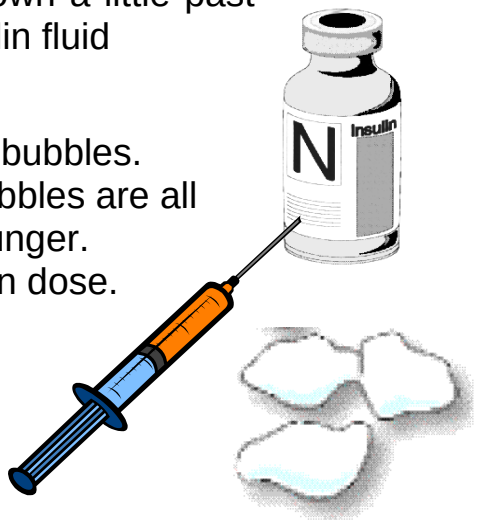
Class: Alpha-glucosidase Inhibitors
Main Site of Action: Intestine
How It Controls Blood Glucose: Slows the digestion of some carbohydrates. After-meal blood glucose peaks are not as high
Generic: Acarbose, Miglitol
Brand Names: Precose, Glyset
Side Effects: Flatulence (Gas), diarrhea
Time to take: With meals

How Do I Prepare My Insulin Injection?

If you are using insulin, you should know that insulin helps to change food you eat to fuel for energy, and helps to store glucose in the liver as glycogen

How To Draw-Up Insulin

1. Gather your needed equipment: insulin, syringe, alcohol pad (optional).
2. Wash your hands and the injection site or use alcohol and allow to dry.
3. Check bottle label to make sure it is the correct insulin.
4. Check expiration date and if expired do not use. A bottle of insulin is good for 28-30 days at room temperature. Keep track of the date you opened the bottle of insulin. You can write the date on the insulin bottle, a calendar or your log book. Unopened bottles should be kept in the refrigerator.
5. For new bottles of insulin flip off the protective cap. Wipe the rubber top of insulin bottle with an alcohol pad.
6. Roll cloudy insulin between hands to mix well; usually 20 times. Clear insulin does not have to be mixed. Never shake the insulin bottle. Shaking causes bubbles which can cause an incorrect dose.
7. If you mix insulin, always draw up the clear insulin then the cloudy.
8. Remove cap from needle. Keep hands away from needle. Draw air into the syringe to equal the number of units of insulin needed.
9. Place needle into rubber top of insulin bottle while the bottle is on the table. Push plunger down to inject air into the bottle.
10. Turn bottle and syringe upside down. Pull plunger down a little past your insulin dose. Make sure the needle is in the insulin fluid to avoid drawing up air. Remove syringe from bottle.
11. Hold syringe upright while checking the syringe for air bubbles. If any air bubbles are present, tap the syringe until bubbles are all at the top. Push bubbles out by gently pushing the plunger. The plunger should now be at the mark for your insulin dose. If there is too much insulin, push it out (into the air).



How Do I Inject Insulin?

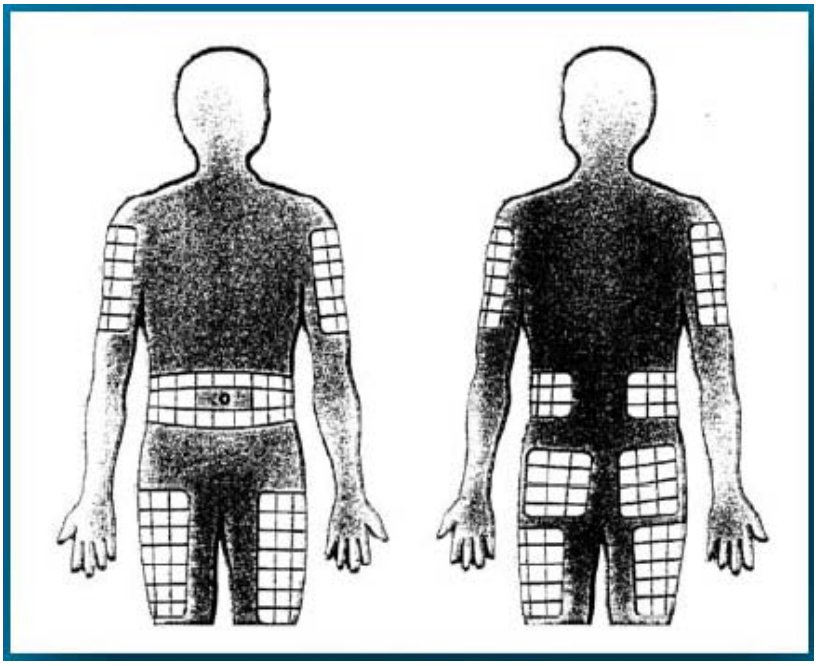
1. Your injection site should be clean. Cleaning the area with an alcohol pad is optional. Allow the area to dry before you inject your insulin.

2. Hold syringe like a pencil. Push the needle straight in the skin (fat area) at a 90-degree angle. If you are thin, push in at a 45-degree angle to avoid your muscle.

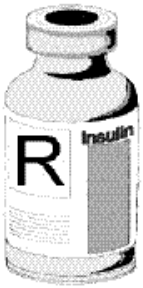
3. Push plunger all the way down to inject the insulin. When insulin is injected, remove the needle from skin and apply pressure to the injection site. Avoid rubbing the site.

4. Dispose of syringe in a sharp's container or a hard plastic container such as an empty laundry soap container.

5. If rotating sites, rotate injections within the chosen site for at least a week before another site is used. Areas to use include abdomen (absorbed the fastest), arms, thighs, and buttocks.



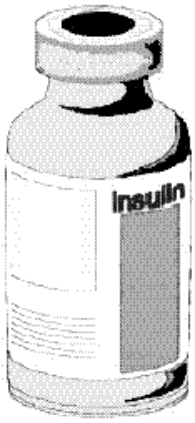
Insulin Types



Short Acting, Regular (R)
Starts working: **30 minutes - 1 hour**
Works best: **2 – 5 hours**
Ends: **6 – 10 hours**

Long Acting, Ultralente (U)
Starts working: **4 – 6 hours**
Works best: **8 – 20 hours**
Ends: **24 – 28 hours**

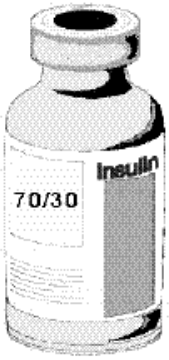
Rapid Acting, Aspart (Novolog®)
Starts working: **10 – 20 minutes**
Works best: **1 - 3 hours**
Ends: **3 – 5 hours**



Rapid Acting, Lispro (Humalog®)
Starts working: **15 – 30 minutes**
Works best: **30 min – 2 ½ hours**
Ends: **3 – 6 ½ hours**

Intermediate Acting, NPH (N) or Lente (L)
Starts working: **1 ½ hour – 1 hour**
Works best: **4 – 15 hours**
Ends: **16 – 24 hours**

Long Acting, Glargine (Lantus)
Starts working: **1 hour**
Works best: **2 – 20 hours**
Ends: **Up to 24 hours**
Not to be mixed with other insulins



NPH and Regular Mixture (70/30)
Starts working: **0 - 1 hour**
Works best: **3 – 13 hours**
Ends: **12 - 24 hours**

What Is Glucagon?

Glucagon is an emergency drug which is given as an injection to raise the blood sugar level. It should be used for a severe insulin reaction or during a hypoglycemic episode that causes unconsciousness.

Ask your health care provider if you need a prescription for glucagon. You and your family members will need to learn how to use it. Review this procedure occasionally with your family members and be sure they know where you keep the glucagon. It will be difficult to figure out how to use it in an emergency situation.

Check the expiration date on the glucagon package occasionally to be sure it is still good. You may want to tape or rubber band a syringe to the box so that it will be easy to find in an emergency.

Glucagon comes in a kit or in a box. If you use a kit, follow the instructions provided.

If you do not use a kit, follow the instructions below.

How Is Glucagon Used?

1. Remove the flip-off tops on bottles 1 and 2. Bottle 1 is the diluting liquid and bottle 2 is a white powder.
2. Pull back the plunger of a U-100 insulin syringe to the 50-unit mark.
3. Set bottle 1 (the bottle with the liquid) on a table or flat surface. Insert the needle of the syringe through the rubber stopper on the top of the bottle.
4. Inject air from the syringe into the bottle, then turn the bottle and needle upside down.
5. Withdraw as much of the liquid as possible into the syringe.
6. Remove the needle and syringe from bottle 1 and insert the same needle into bottle 2 (the bottle with the powder). Inject all liquid from the syringe into bottle 2.
7. Remove the needle and syringe. Shake the bottle gently until all the powder is dissolved and the solution is clear.
8. Withdraw the entire contents of bottle 2 (the mixed glucagon) back into the syringe.
9. Inject all the glucagon in the syringe into the upper arm, abdomen, thigh, or buttocks, the same way you would inject insulin.

Important Precautions To Remember

1. If you are a family member or friend administering the glucagon, turn the person onto their side or abdomen. People often vomit after receiving glucagon.
2. As soon as the person has woken up, is alert and able to eat, feed them. Give them some juice or non-diet soda. Be sure they are able to swallow. Then give them a longer acting carbohydrate and protein, such as a meat or cheese sandwich. Glucagon only acts for a short period of time, so it is very important that they take some extra calories.
3. If the person does not wake up after 15 minutes, repeat the dose of glucagon and call 911 for assistance.
4. Be sure to call your health care provider after an unconscious reaction or a seizure occurs. Document the event in the glucose monitoring log book.

Review this procedure with your health care provider so your family member or friend will be prepared in case you should ever need to use glucagon.

Adapted from Texas Department of Health diabetes toolkit - 2004

Self-Monitoring of Blood Sugar

Blood glucose monitoring shows how food, medicine, exercise and stress affect your blood glucose. Frequency of monitoring is individualized based on your level of glucose control, type and/or change of medications, low blood sugar reactions, exercise and when you and your health care provider want the test results to adjust therapy.

Find out from your health care team the following regarding self-monitoring of blood sugar:

- Why and how often you want to routinely monitor, including target glucose range _____
- Indications for more frequent monitoring such as medication changes, diet changes, illness or infections, surgery, increased stress, and frequent episodes of high and low blood sugar
- Preparation and use of monitoring and puncture devices to include cleaning, calibration and disposal of used lancets and strips
- Work with your health care team to understand blood glucose results and when to take action and whom to call when results are out of target range

General Procedure for How to Self-Monitor Blood Sugar

- Wash hands with warm soapy water to clean surface and promote blood flow
- Load lancet in lancing device
- Turn meter on
- Check expiration date of strips and prepare test strip. Place bottle cap on remaining strips to maintain potency
- Insert test strip when meter is ready for blood sugar testing
- To reduce pain, prick the sides of the tips of the fingers, avoiding the “fleshy” center pads
- Remember that blood flow follows gravity – hold the finger down so that blood will flow down to the tip of the finger
- Gently “milk” the finger from the base out to the tip. This will help to assure you will get an adequate blood sample
- Rotate test sites between all fingers or sites recommended by meter manufacturers
- Apply blood sample to appropriate site on the test strip. Some strips require that the blood be placed on top of the strip while others will “wick” the blood sample from the side or edge. Check your user’s manual for specific instructions on blood sample placement
- Place gauze or bandage on finger to stop bleeding
- As the meter counts down, watch for test results and record in log book
- Properly dispose of finger-pricking device and strips (put in plastic container that can be sealed). Do not share device with others
- Take your log book to every clinic visit
- Call the 800 number on back of machine if there are questions or problems with the meter
- Keep your equipment clean and check accuracy according to manufacturer’s directions
- Attend a diabetes education class to learn more on _____(date) at _____ (time)

Self Monitoring Blood Sugar Record

Name:

Date	**Before Breakfast**	**Before Lunch**	**Before Dinner**	**Bedtime**	**Remarks:** Insulin reaction, weight change, diet, meal times Illness, stress, activity, etc

What are the Basic Diet Principles?

- **Eat at regular times – distribute carbohydrate intake throughout the day**
- **Do not skip meals or go too long without eating**
- **Read labels to determine how much carbohydrate, fat and protein are in the foods that you eat**
- **Eat a variety of foods such as fruits, vegetables, whole grain breads, cereals (which increase fiber), lean meats and skim milk**
- **Drink plenty of water or sugar free beverages.**
- **Avoid fried foods or foods with lots of saturated fat and cholesterol**
- **Use alcohol only with the advice of your health care provider and never drink on an empty stomach (can cause blood sugar to go too low)**
- **If overweight, decrease fat intake and control portion sizes**
- **Use the diabetes food guide pyramid to guide your food choices through the day**
- **Eating a healthy diet and exercising work together to improve your health**

What's Important to Me on the Food Label?

- **Locate the serving size – all of the numbers on the label are for one serving**
- **Locate total grams of <u>carbohydrate</u> (CHO)**
  - 15 grams = 1 CHO food choice
  - Ignore sugar grams
  - A food is high in fiber if it contains 3 grams of fiber or more per serving
- **Locate total grams of <u>fat</u>**
  - Limit fat to less than 30% of your daily calories
  - Low fat foods have 3 grams of fat or less per 100 calories
  - Balance higher fat foods with lower fat foods
- **Locate <u>cholesterol</u>**
  - A food low in cholesterol has 20 mg or less per serving
- **Locate <u>sodium</u>**
  - A low sodium food has 140 mg or less per serving

What Does This Food Label Tell Me?

The new food label can be found on food packages in your supermarket. Reading the label tells more about the food and what you are getting. What you see on the food label – the nutrition and ingredient information – is required by the government. This picture shows what the new label looks like and explains some of its features.

Serving Size
Similar food products have similar serving sizes based on amounts people actually eat. This makes it easier to compare foods.

Total Carbohydrates
15 Grams equals 1 Carbohydrate Choice

Vitamins and Minerals
These are the only ones required. Some labels may list other vitamins and minerals.

Calories per Gram
Approximate number of calories in a gram of fat, carbohydrate and protein.

Nutrition Facts

Serving Size 1 cup (228g)
Serving per Container 2

Amount per Serving

Calories 90 Calories from Fat 30

	% Daily Value *
Total Fat 3g	5%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 300mg	13%
Total Carbohydrates 13g	4%
Dietary Fiber 3g	12%
Sugars 3g	
Protein 3g	

Vitamin A 80% • Vitamin C 60%
Calcium 4% • Iron 4%

Percent Daily values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your caloric needs:

	Calories:	2,000	2,500
Total Fat	Less than	65g	85g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrates		300mg	375mg
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

% Daily Value
Shows how a food fits into a 2,000-calorie diet.

You can use % Daily Value to compare foods and see how the amount of a nutrient in a serving of food fits in a 2,000-calorie diet.

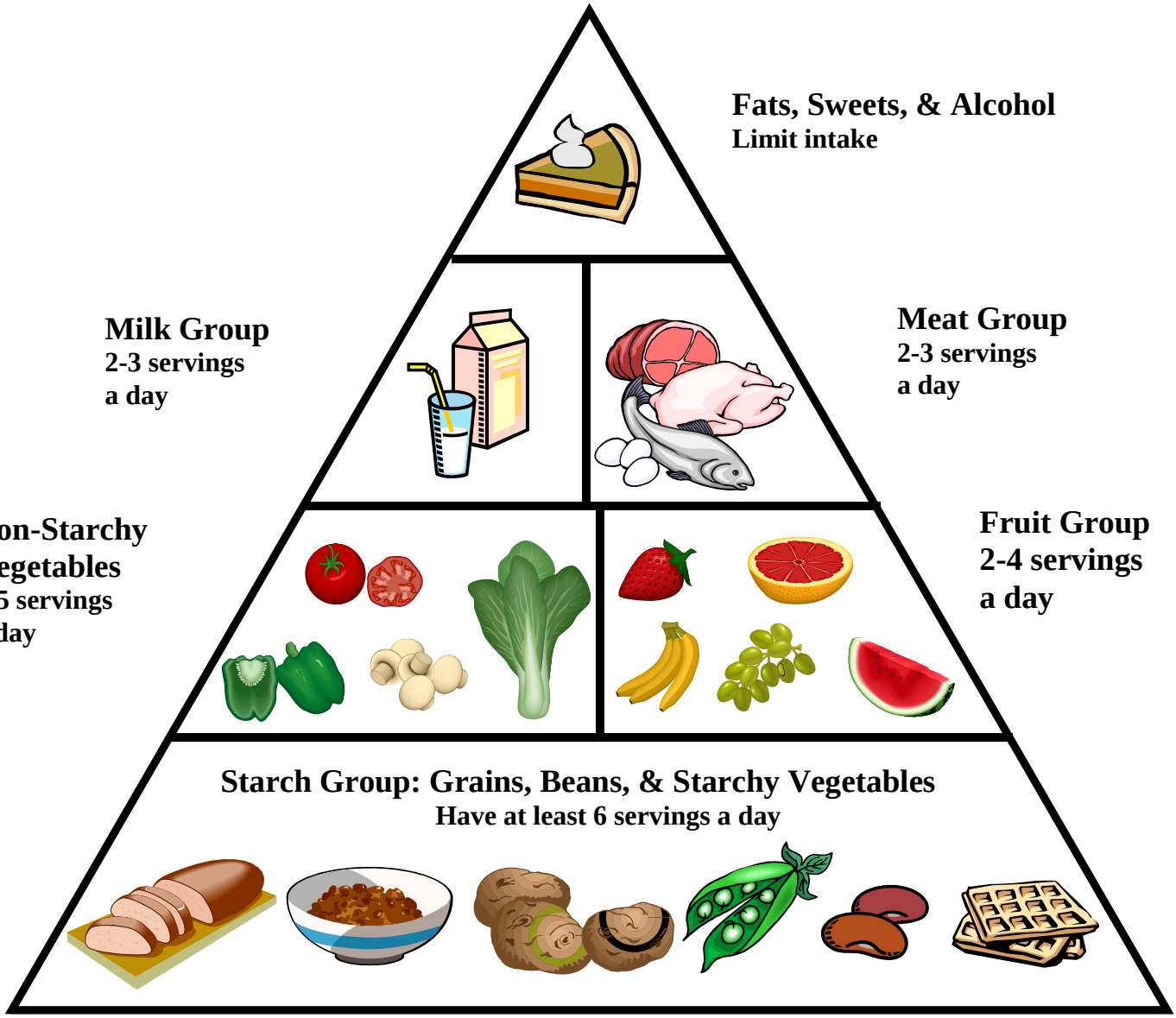
Daily Values
Numbers set by the government based on current nutrition recommendations.

Label may be listed as 2,000 and 2,500 calories. Your own nutrient needs may be less or more.

Why do some food packages have a short or abbreviated nutrition label?

Foods that have only a few of the nutrients required on the standard label can use a short label format. What's on the label depends on what's in the food. Small and medium-sized packages with very little label space can also use a short label.

What is the Diabetes Food Guide Pyramid?



Dietary Changes You Can Make

You can make a difference in your blood glucose control through your food choices. You do not need special or diet foods. The food that is good for you is good for your whole family.

Eat a wide variety of foods every day. Try new foods. Eat high-fiber foods, such as fruits, vegetables, grains, and beans. Use less added fat, sugar and salt.

Do not skip meals. You need to eat at least three meals a day at regular times. You may need a bedtime snack if you take diabetes medicines.

Ask to see a dietitian to get more help in planning your diet.

What are Some Common Serving Sizes from the Food Pyramid?

Fats, Sweets, and Alcohol
Limit intake

- Oils like canola oil or olive oil
- Margarine (choose soft or liquid margarine instead of stick margarine)
- Mayonnaise
- Nuts and seeds
- Salad dressing
- Cream cheese, sour cream, butter, shortening, lard, and meat fat (which are not recommended for good heart health)

Milk Group
Have 2-3 servings a day

- 1 cup of milk (low fat)
- 6 ounces of yogurt (low fat, unsweetened)

Meat Group
Have 2-3 servings a day

- 2 to 3 ounces of cooked meat, poultry, or fish
- 1/2 to 3/4 cup tuna or cottage cheese
- 2 to 3 ounces of cheese
- 1 egg, 2 egg whites, or 1/4 cup egg substitute count as 1 ounce of meat
- 2 tablespoons peanut butter count as 1 ounce of meat

Non-Starchy Vegetables
Have 3-5 servings a day

- 1 cup of raw vegetables
- 1/2 cup cooked vegetables
- 1/2 cup of tomato or vegetable juice

Fruit Group
Have 2-4 servings a day

- 1/2 cup fruit juice
- 1 small piece of fresh fruit
- 1/2 cup canned fruit
- 1/4 cup dried fruit

Starch Group
Have at least 6 servings a day

- 1 slice of bread or 1 small roll
- 1/2 hamburger or hot dog bun, bagel or English muffin
- 1 small piece of cornbread
- 3/4 cup dry cereal (unsweetened)
- 1/2 cup cooked cereal
- 1 small waffle
- 1 small (4 inch) pancakes
- 1/3 cup cooked rice
- 1/3 cup cooked noodles
- 1/2 cup white or sweet potato or 1/2 small baked potato
- 1/2 cup corn or I small corn on the cob
- 1/2 cup beans or peas (beans and peas are starchy except for green beans, wax beans, Italian beans and pea pods)
- 4 to 6 crackers
- 3 graham cracker squares
- 3 cups popcorn

Sick Day Management

Common illnesses, such as the flu, vomiting and diarrhea can cause serious problems for people with diabetes. Short-term illness can often be managed at home by following these guidelines:

1. Take your insulin or diabetes pills. When you have an illness, infection, or high fever you still need insulin, but it may be a different dose. IIlness raises blood sugar levels. Stop Metformin (Glucophage) if you have a high fever, diarrhea or vomiting.

2. The most important thing is to check your blood sugar levels every four hours. You and your health care provider will need to know the results of these tests so you can make any necessary changes. If it is above 250 mg, and you have type 1 diabetes, also check your urine for ketones.

3. Take liquids every hour while awake to avoid dehydration. High blood sugar, fever diarrhea, nausea, and vomiting can lead to loss of too much body water. When you lose too much body fluid, you may develop the following symptoms:

- *Dry mouth*
- *Thirst*
- *Decreased urination*
- *Dry, flushed skin*

Try to drink fluids every hour while you are awake. It may be easier to take small sips of fluids every 5-15 minutes.

4. Keep a record of all the foods and drinks you eat while you are ill. Report this to your health care provider.

5. If you are sick and your blood sugar is above 250 AND urine ketones are positive or your blood sugar is consistently very high (above 300) after 2-3 checks, call your health care provider immediately or go to the hospital or clinic. Your health care provider may need to prescribe medication for your infection, nausea, vomiting, diarrhea or whatever problem you may have.

6. Test your urine for ketones. If you have type 1 diabetes, you may be asked to check your urine for ketones every 4-6 hours while you are sick.

Food and Drinks for Sick Days

Here is a list of foods and drinks that you can take when you are vomiting and do not feel like eating; Try to eat **one** or more of these serving sizes **every hour** until you are feeling better.

Drinks — Amount You Should Have

Caffeine free pop with sugar (not diet) such as
Ginger ale, Coke, Pepsi and 7-Up …… 1/2 cup

Corn syrup, honey, or sugar mixed
in tea, hot water, or lemon juice …… 1 Tbsp

Cranberry juice or grape juice or apple juice …… 1/2 cup

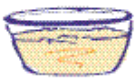
Regular Gatorade® …… 1/2 cup

Water …… as tolerated

Foods

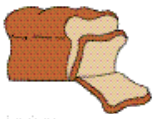
Regular Jell-O (not sugar free) …… 1/4 cup

Applesauce-unsweetened …… 1/2 cup



Applesauce-sweetened …… 1/4 cup

Bread or toast …… 1 slice



Cooked cereal (oatmeal, grits, cream of wheat) …… 1/2 cup

Crackers …… 6 small saltines

Ice cream or sherbet …… 1/2 cup

Popsicle …… 1/2 twin bar

Plain yogurt …… 6 ounces

Sick-Day Kit

Plan for sick days. Gather supplies in advance.
Ask your provider about prescribed medicines and to recommend over-the counter medications.

An adequately stocked sick day kit should contain:

- Provider or telephone care phone number
- Blood glucose testing equipment
- Ketone test strips (if type 1)
- Clear liquids with sugar (apple juice, regular soda, popsicles, Kool-Aid®, Jell-O®)
  Use these when glucose is near goal and "real food" is not tolerated
- Clear liquids without sugar or caffeine
- Thermometer
- Acetaminophen
- Decongestant

- Sugar free throat lozenges, sugar free cough drops or syrup
- Anti-diarrheal medicine (check with your provider)

Contact Your Health Care Provider if You Have:

- A fever of 101° Fahrenheit or greater
- You have cold or flu symptoms that last longer than ____ days
- Nausea, vomiting or diarrhea persist, especially if no food or fluid intake for more than _____ hours
- Symptoms of shakiness or nervous feeling, lightheadedness, sweating, rapid heart rate or confusion that do not improve after eating carbohydrate foods
- Any of the following problems on the feet: burns, splinters, stubbed toe, foot trauma, blister, swelling, black and blue discoloration, bleeding, or oozing of fluid

- Urine tests that show moderate to large amounts of ketones
- A persistent cough

- Change in vision

- A sore or cut that does not heal
- Tooth pain

Seek Urgent or Emergency Care if You Have:

- Chest pain or shortness of breath
- Trouble breathing, swelling of your legs and hands and have weight gain (in general, if you gain more than 2 pounds overnight or more than 3-5 pounds in one week)

- Numbness or tingling in arms or hands, trouble walking, or stumbling
- Confusion or can't think clearly

These materials were adapted from Life with Diabetes: A Series of Teaching Outlines, American Diabetes Association, © 2000

Benefits of Exercise

Getting Ready to Exercise

Always check with your health care provider before you begin an exercise program. You may need a checkup to ensure that your body can handle it. You may even need a stress test to be sure that your heart is healthy enough.

Some Common Benefits Are:

- More energy
- Lower blood pressure
- Lower triglycerides
- Increased strength
- Better blood sugar control
- Lower cholesterol level
- Less medication
- Easier weight control

Getting Started

Start slowly once you have your health care provider's approval. Whatever the exercise you choose, make sure it is something that you'll like.

Good aerobic exercise includes brisk walking, biking, swimming, jogging, and dancing.

You should not lift weights if you have a diabetes-related eye disease or high blood pressure.

Do less than you think you can at first, and increase your efforts slowly. If you overdo it, you may not continue.

Test your blood sugar before and after you exercise. Do not exercise if your blood sugar is greater than 250 mg and you have ketones in your urine or your blood sugar is less than 100 mg. Carry a snack of quick-acting carbohydrate if you take diabetes medicine. Good choices are juice, glucose gel or tablets, a small packet of honey, or some Life Savers®.

If you exercise more than usual you may have problems with low blood sugar. Check your blood sugar and be prepared to treat it.

Drink plenty of water, especially on hot days.

Wear a visible diabetes ID.

The benefits of regular activity will last a lifetime.

Don't give up. Set yourself up for success.

NOTES:

Guideline Toolkit

March 2004